

# INDY

## ham radio

### NEWSLETTER

# W9JP

INDIANAPOLIS RADIO CLUB, INC.

Regular meetings held on the 2nd & 4th  
Fridays at 8:00 PM in the United  
Christian Mission Bldg. 222 S. Downey

Trustee Ron Williams W9JVF  
1147 N. Emerson 46219

Editor Bob Osterhous W9PSE

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Phone 356-2839

FEBRUARY 19, 1973 INDIANAPOLIS RADIO CLUB INC. ISSUE NO. 4

PROGRAM FRIDAY FEBRUARY 23, GO DIRECTLY TO MALLORY TECHNICAL INSTITUTE (IVY TECH)  
TOUR 1315 E. Washington St. Tour Begins at 7:30 Sharp. Park on west  
7:30 side of Building and enter thru side door. SEE ATTACHED MAP  
AT MALLORY FOR FULL DETAILS MEET IN ROOM 220. Ed McNay (ex W9EXU) has arranged  
a full tour plus a program on "TROUBLE SHOOTING ELECTRONIC CIRCUITS,  
WITH DEMONSTRATIONS IN SCHOOL LAB WITH SCOPE ETC.  
HERE IS YOUR CHANCE TO LEARN SOMETHING...FREE...DONT MISS THIS TECH PRG.

PROGRAM REVIEW: Robert Kryter gave the IRC a stimulating insite into the atomic  
and "H" bomb and energy problems.. see reverse side for full review.

THANKS Mr. Bernard J. Weimer - W9DLG for his donation to the IRC of an audio  
GO TO: generator, three inter-comms, and a line amplifier. Tnx for the gear.

TNX FOR Members & guests are due a vote of thanks for their contrubutions  
DONATIONS to the club flower fund in the amount of \$11.31 and for the Southport  
High School Radio Library fund in the amount of \$11.87 Feb 9th meeting.

DIRECTORY: Alvey Pittman Jim Sugioka and other interested members are working  
on organizing the club directory. Charlie Byers WB9GCD will help  
on securing advertising, Jane Heaton...etc who's next to volunteer//??

RED Cross Malcolm Mallette WA9BVS has extended the IRC to visit them at their  
Club club meetings at the Red Cross building on their Monday meetings.

PHOTO The Ed received a photo of himself taken at a recent directors  
BUFF'S meeting with available light, F/2.3 ASA 250 XX 1/30 sec. on  
automation with a Konica SLR reflex. So come to the club and if  
you copy this kind of talk their are others photo buff's who are hams too!

ON THE AIR On 2 FM Mel Peterson WA9ZXS advises that Young Snodgrass WA9QMU says  
RUMOR to say hello to all the gang at IRC Mel talked to him for a while  
MILL the other day/ A round table quickly formed on .16/76 K9LPW with  
some old friends, Hank Wolfla K9LZJ, Al Minnich K9SUW, Mel WA9ZXS  
we in QSO with Bob W9PSE, Al now lives on West Mich and no longer  
has such a long drive to his work at J & L. Ed logged NOVICE QSO  
with Doug Loughmiller WN9KPC, Tom Chance WN9KWS on 40 meters,  
plus WN1 Mass. Wn4 Tampa, Fla etc. for first op time in months.

Founded 1914 .....our 59th year!



PROGRAM REVIEW OF ROBERT KRYTER, 9 Feb. 1973

Our energy requirements are doubling every ten years, while our fossil fuels are limited. Our petroleum imports are increasing yearly, plus the rate of pollution. Stars are a terrific source of energy, and if their thermonuclear energy evolving process could be duplicated, we should have abundant energy for centuries. Our sun is a TN source of energy by an interaction converting Hydrogen to Helium, and emitting energy surplus, thus some of the mass of the sun is actually converted to energy via the well known equation  $E=MC^2$ . This process is one of fusion, the putting together of the nuclei of atoms with the evolution of energy.

Atomic energy sources currently use a different process called fission wherein an unstable, energy charged atom of Uranium is broken apart into garbage elements and energy is evolved along with a lot of useless radioactive junk which must be gotten rid of. In the fusion process, all this is obviated since the result is Helium, which is an inert or noble gas, non-radioactive and produced in small amounts. This gas has commercial value or could be released into the atmosphere like our carbon dioxide is now.

Deuterium is being currently tried in experimental reactors, because it contains a neutron along with its nuclear proton, and when two of these nuclei are jammed together at high energy (velocity) they fuse together and become Helium and release some energy known as the binding energy. Tritium and deuterium reactions are more feasible.

We have to actually make a small star or sun and keep it in a bottle. Now the temperature at which such reactions take place is about 180 million degrees, so our problem is in three steps. How do you ignite such a star, how do you contain anything that is a 180 million degrees, and how do you take the energy out of it? The nuclei of deuterium and tritium are placed in a doughnut shaped one turn of a secondary of a transformer whose primary is connected to a charged up bank of capacitors the size of a 10 story hotel and the current in the secondary heats the nuclei to about 5 million degrees. Then the plasma (pure nuclei) is squeezed by the application of intense magnetic fields, which causes the temperature to rise, currently up to around 65 million degrees, insufficient to ignite the plasma. Additional temperature is expected from the use of LASER energy, currently under experimentation.

The Russians with their TOKAMAK reactor are ahead of USA, with Britain and France close behind us. All water contains a small but useful amount of deuterium, so we have virtually an inexhaustible supply of plasma fuel. One gallon of water will supply enough fuel energy equivalent to 300 gallons of gasoline at a cost of 4 cents. Bob opined that we should have a major breakthrough within 5 years, and a working model in 10 years. There is great certainty that such a process will be evolved thru the use of Laser beams and other sophisticated knowledge.

Bob's delivery was dramatic and the house gave him a standing ovation, a well deserved kudo, not often seen at the meetings. We are certainly glad you were able to escape from the cemetery in time to make the engagement.....

Prepared by: Art Schultz, W9BR, Program Arm Twister

REMEMBER TO GO DIRECTLY TO MALLORY TECHNICAL INSTITUTE 1315 E. Washington St.

TOUR STARTS AT 7:30 Sharp ROOM 220. CUL.



# PARKING MAP

